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Area-Wide Soil Contamination Task Force – Meeting 2
April 1, 2002, Wenatchee, WA

Meeting Summary

The Area-Wide Soil Contamination Task Force met for the second time on April 1, 2002 in Wenatchee. The objectives of this meeting were to:

- learn about the evidence of arsenic and lead residues in Washington soils and about cleanup levels for arsenic and lead
- discuss draft communication principles and a draft workplan for the Task Force
- provide early feedback and direction on upcoming project work, including the confirmation sampling pilot project, the identification of categories of sites and protective measure alternatives, and institutional frameworks case studies

Introductions and Agenda Review

The meeting began with introductions and a review of the materials for the meeting. The Task Force had no comments or questions on the final ground rules for the project or the draft summary of the first Task Force meeting on February 7. Julie Wilson of Landau Associates explained that the Task Force would be receiving a lot of information during the course of this project, especially the next few months, but that agency and contractor staff would distinguish between items that the Task Force should review and general background information. She also explained that Task Force attention to and involvement in framing information collection would be critical to the success of the project—that is, to making sure the Task Force has the information it needs to deliberate and develop findings and recommendations.

Communication Principles and Contacts Update

In early March, the Task Force co-chairs, other interested Task Force members, and representatives from the Departments of Ecology and Agriculture held a conference call to discuss communications for this project. The draft communication principles were the outcome of this conference call. Steve Gerritson, one of the Task Force co-chairs, reviewed the communication principles at the meeting and the Task Force agreed to the principles with one clarification (discussed below). The communication principles are:

1. Both the agencies and the Task Force have a role in communication with the press and the public; the desired outcomes are collaboration and no surprises.
2. There will be a role for both proactive and responsive communication approaches during the Project.
3. Communication strategy must complement public involvement, but is separate from the public involvement effort. Communication efforts and strategy will be commensurate with the status of the project. For example, in the initial phases where the project is in an information gathering and learning mode, communication efforts will be focused on responding to inquiries; as the project progresses and the

Task Force moves towards findings and recommendations, communication may become more proactive.

4. Communication updates will be a standing Task Force agenda item and will include a review of media contacts and other inquiries since the last Task Force meeting, a forecast of expected contacts before the next Task Force meeting, and a discussion of any evolution in key Project messages.
5. The agencies' communication role encompasses responsibility to the Project, the Task Force, and the residents of Washington State. As the agency responsible for the coordinating aspects of the Project, Ecology will work with the Task Force in developing communication approaches consistent with the agency's broad communication responsibilities and the Task Force's communication interests.

Task Force members generally supported the communication principles, but questioned whether Ecology's communication responsibilities may conflict with the Task Force's interests in the early stages of the project. Jim Pendowski of Ecology clarified that Ecology intends that its communication effort will keep pace with the Task Force's communications in that it be commensurate with the initial stage of task force deliberations and then broaden in later stages of the project.

After discussing the communication principles, the Task Force discussed some standard language describing the project and addressing key issues that Ecology will develop for Task Force review. The idea is to make this standard language available for Task Force members to use in their communications (if they wish) and for Ecology and the other chartering agencies to use in their communications.

Standard language will address the following key messages and issues:

- In this early stage of the Project, there is a need for information gathering and learning.
- The Project may result in new approaches to addressing area-wide soil contamination, but it is not far enough along to predict its outcomes.
- The safety of food crops and current agricultural operations.
- The Project is not intended to add sites/properties to the contaminated site register.

Several Task Force members had questions about the nature of the message on the safety of food crops and current agricultural operations. The Task Force decided to use the language from the project's operating assumptions that states that current agricultural operations are beyond the scope of this project as a start for the standard language on this issue. The Task Force also asked Ecology and the other chartering agencies to consider making more precise statements in the draft language regarding:

- the safety of food crops and arsenic and lead soil contamination
- workers' exposure to arsenic and lead residues in the soil

The draft language on this and other key issues for the project will be distributed to the Task Force for review before the May meeting. Ecology will also periodically compile and distribute relevant news articles to the Task Force by e-mail.

Finally, the Task Force discussed the communication report and forecast. The Task Force agreed to report on signification outreach and communication activities that had occurred since the previous meeting and to forecast any significant outreach and communication activity anticipated before the next meeting. The only Task Force member with outreach/communication activity to report was Jim Pendowski (ex officio, Ecology). Mr. Pendowski reported that Ecology had received a message from a reporter at the *Wenatchee World* asking for information on the project and that the Department would follow up with the reporter. A number of Task Force members mentioned that the recent editorial in the *Seattle Times* on the Everett smelter case might result in inquiries of this Task Force.

Evidence of Area-Wide Contamination in Washington State

Julie Wilson of Landau Associates gave a presentation on what is currently known about the sources and distribution of widespread arsenic and lead in soil in Washington. She reviewed direct and indirect evidence that low-to-moderate levels of soil contamination are present in Washington. She noted that natural background concentrations of arsenic and lead in the soil are generally below 7 mg/kg for arsenic and 17 mg/kg for lead (the 90^{th} percentile values in statewide pooled data) and explained that arsenic and lead tend to stay where they are released in the environment. Potential sources of area-wide arsenic and lead contamination in Washington include:

- *Historic smelter operations.* Ms. Wilson summarized the information known about soil contamination from four large smelters that operated historically in Tacoma, Everett, Harbor Island, and Northport.
- *Historic pesticide use.* The U.S. fruit industry used lead arsenate to control insects from the early 1900s to the 1940s. In Washington, it was used primarily to control the codling moth in apple and pear orchards both east and west of the Cascades.
- *Other Sources.* Roadside lead, lead-based paint, and arsenic-treated wood also may result in soil contamination.

Work Group I and the contractor support team will compile and summarize the available soil data for smelter-impacted areas and estimate the likely concentrations of arsenic and lead due to historic pesticide use and other sources as part of the preliminary estimates task (discussed further below).

Arsenic and Lead Soil Cleanup Levels

Dave Bradley gave a presentation on the general approach used to establish cleanup standards under the Model Toxics Control Act (MTCA) and on the MTCA cleanup levels for arsenic and lead. He noted the difference between a cleanup level, which determines a concentration of a particular hazardous substance that does not threaten human health or the environment, and a remediation (or action) level, which is a higher level established on a site-specific basis to define what particular cleanup methods will be required for particular sites. Mr. Bradley described four steps in establishing cleanup levels under MTCA:

1. Identify land uses and exposure pathways

2. Establish cleanup levels for individual hazardous substances based on human health protection
3. Establish cleanup levels for individual hazardous substances based on ecological protection
4. Evaluate modifying factors at particular sites

Arsenic cleanup levels have been developed to prevent risks from two main pathways: direct contact and contamination of ground water. The standard MTCA Method A soil cleanup level for arsenic is 20 parts per million (ppm); this is a precautionary level based on an estimate of the upper end of the range of natural background levels. Mr. Bradley also discussed a number of remediation levels that have been established for arsenic at specific cleanup sites; these range from 32 ppm to 530 ppm.

Lead cleanup levels are based on preventing child blood lead levels that exceed federal guidelines. The standard MTCA Method A cleanup level is 250 ppm for sites with unrestricted land uses and 1000 ppm for industrial sites. Mr. Bradley explained that, in addition to the standard MTCA cleanup levels, site-specific cleanup levels (typically 350-500 ppm) for lead have been established using the EPA's Child Lead Model. As with arsenic, Mr. Bradley also discussed a number of remediation levels that have been established for lead at specific cleanup sites; these range from 353 ppm to 4,100 ppm.

To summarize, Mr. Bradley stated that cleanup levels are dependent on exposure, toxicity, and the policy choices underlying MTCA. Exposure and toxicity are also important considerations in determining how and how quickly to respond to situations where soil concentrations exceed the cleanup standards.

Task Force members had several questions and comments during this presentation. This led to several requests for information for future Task Force meetings, including:

- epidemiological information on health risks from arsenic and lead
- summary of blood lead levels and other health data for Washington residents
- research on correlations between blood lead levels and soil sampling data for the Tacoma smelter plume site
- methodological information on how risk-management decisions about lead interventions are made
- more information on the characteristics of the Dupont cleanup site and how remediation levels were established at that site
- information on how ecological evaluations might affect site-specific cleanup levels or remediation levels.

Overview of Task Force Workplan

Elizabeth McManus of Ross & Associates led a discussion with the Task Force on the draft Task Force workplan. She described three overlapping phases in the project:

- Information gathering to understand the scope and context of the problem and identify a wide range of potential solutions (spring, summer 2002)

- Assessing the implications of the information and narrowing the range of potential solutions (summer, fall 2002)
- Developing findings and recommendations (fall 2002, winter, spring 2003)

The workplan provides an initial schedule for Task Force meeting topics, but it is adjustable and meant to evolve. This schedule includes opportunities for the Task Force to "preview" or shape the direction of work products and then receive updates and discuss results as work progresses. Current plans are for the Task Force to develop draft findings and recommendations in February 2003 and then do public outreach on the draft findings.

The Task Force asked about the plans for the joint learning on MTCA in June and suggested that it might be useful to do one or more case studies of MTCA cleanups. In particular, Task Force members suggested three potential types of case studies:

- residential sites
- school sites
- non-school public-use areas

These could either be with existing sites or sites that are being converted from agricultural uses. The Task Force also noted that there might have been important differences between land use conversion for large housing developments and cases where only a few lots were developed, and, if so, why these differences might have occurred.

Other Arsenic and Lead Related Activities

During lunch, Jim Pendowski of Ecology discussed some of the other activities occurring around the state dealing with arsenic and lead contamination. These activities include:

- *Tacoma Smelter Plume (TSP) Project.* An advisory group has formed to study and recommend ways to address the impacts of elevated lead and arsenic levels on residential property values within the TSP. There is a mainland study underway to determine the extent and magnitude of the TSP; some of the sampling information has already been released.
- *Everett Smelter Site.* About 10% of the residential housing area that needs to be remediated is complete.
- *Eastern Washington.* Ecology conducted a reconnaissance study in 1999 that involved soil sampling at sites volunteered by Ecology staff and local government agencies to determine whether arsenic and lead were present in soil at selected homes, parks, and schools.
- *Mining issues.* EPA is investigating contamination from mining and related activities at Lake Roosevelt to determine whether to place it on the National Priorities List. Ecology's cleanup activities at mining sites in Washington have focused on meeting Clean Water Act requirements. Metal transport across the Spokane River in the Coeur D'Alene basin is another area of concern.
- *Arsenic Drinking Water Task Force.* The Department of Health has formed an agency task force to develop ways to implement new regulations on arsenic in drinking water.

In reference to the earlier discussion on project communications, Mr. Pendowski also noted that the Association of Washington Businesses has invited Ecology to a panel discussion to discuss the Area-Wide Soil Contamination Project at the Association's environmental conference. A number of Task Force members expressed concern about Ecology participating on such a panel at this early stage in the process—before the Task Force has had a chance to develop much information or begin to consider findings or recommendations. Mr. Pendowski explained that Ecology's message would contain information already available about the project and be compatible with the messages the Task Force is developing (see discussion of communication principles, above).

Preliminary Results of the Information Survey

Jennifer Tice of Ross & Associates gave an overview of the preliminary results of the information survey. The information survey included about 20 interviews and literature reviews in each of the project's three analytical areas. This research involved collecting the following types of information:

- arsenic and lead concentrations and distribution (both naturally occurring levels and contamination due to pesticide use and smelter emissions)
- descriptions and evaluations of protective measures and institutional alternatives
- cleanup, public health, educational, and other activities considered, undertaken, and planned at large smelter and/or mining sites in other states and in Canada
- statewide strategies for addressing historic pesticide contamination and for evaluating and cleaning up proposed school sites
- a network of contacts and references to draw on later in the project

An update on the final results of the information survey will be presented at the May Task Force meeting; this research will inform future work products and analyses in the project. Information gathering for the project will continue, but will be increasingly focused.

The Task Force had several suggestions for additional research, such as investigating:

- what Southern California, Florida, Illinois, and the Carolinas have done in terms of agricultural land converted to other uses
- a lead study conducted at the smelter in Port Pirie, Australia
- the efforts of the Ontario Ministry of Environment, and potentially also of the government of Nova Scotia, to study and address lead arsenate pesticide contamination

Nature and Extent – Preliminary Estimates

Dr. Julie Wilson of Landau Associates discussed the activities of Work Group I with the Task Force and a planned approach to developing a statewide estimate of the level and extent of area-wide arsenic and lead contamination in soil. The preliminary estimates task will include quantifying contamination based on historic use of agricultural chemicals and airborne point sources (i.e., smelters) and developing qualitative estimates of the potential for contribution from other sources. Dr. Wilson described sources of this information for this work, and asked the Task Force for additional

suggestions, especially in terms of refining estimates of contamination from historic agricultural pesticides and leaded gasoline.

The Task Force requested information not only on the scope of historic pesticide application, but also on the amount of agricultural land being converted to other uses. Task Force members had several suggestions for the preliminary estimates research, noting that:

- The Chelan County Planning Commission has information on the amount of agricultural land being converted to other uses.
- The Washington State Department of Transportation has done some work on roadside lead. Another source of information might be the American Petroleum Institute study on the topic.
- Calcium arsenate and calcium arsenite also were used in the past as insecticides and, for calcium arsenate, as a turf herbicide, but they are no longer registered for use as agricultural pesticides. The only pesticides containing arsenic that are currently registered are wood preservatives, and these are in the process of being phased out.
- Ironite, which contains lead and arsenic by-products, is currently used as a fertilizer in Washington. It complies with Washington State heavy metals fertilizer standards and has a low use rate recommendation.

Schedule for Preliminary Estimates

Task Force members raised concerns about plans to complete the preliminary estimates task and publish the results by the end of May 2002. A number of Task Force members predicted that the conclusion of the preliminary estimates analysis would be that the extent of area-wide contamination in Washington is great and that, therefore, site-specific assessments might be necessary to determine whether there is contamination at individual properties.

A few Task Force members expressed concern that releasing the preliminary estimates, and in particular a state-produced map of elevated arsenic and lead concentrations, could have considerable adverse economic impacts. For example, the insurance industry might use that information to set rates and purchasers might increasingly need to conduct site assessments of properties for lending and insurance purposes. A number of Task Force members discussed whether the impact of publishing the preliminary estimates might be minimized if the conclusions on the extent of area-wide contamination were presented in conjunction with practical recommendations for addressing that contamination. Task Force members also discussed the extent to which release of more detailed information about the nature and location of elevate levels of arsenic and lead associated with the Tacoma Smelter Plume have had adverse effects on property values, lending or insurance in Pierce County. To date, although certain commercial developments have been affected, general adverse effects have not been observed.

To address these concerns, the Task Force made the following suggestions:

- Conclusions should be worded carefully; they should clearly state the assumptions used and identify the uncertainties in the analysis.

- The preliminary estimates should be kept in draft until later in the project when the Task Force has determined what, if anything, should be done about area-wide soil contamination.

Nature and Extent – Confirmational Sampling Pilot Project

As an introduction to the discussion on the confirmational sampling pilot project, Rick Roeder of Ecology described how low-to-moderate level arsenic and lead soil concentrations are currently being handled in Eastern Washington. In general, low-to-moderate arsenic and lead soil contamination is addressed through the MTCA independent or voluntary cleanup program-through remedies largely based on consolidation, capping, and other exposure controls. Mr. Roeder discussed three examples of successful developments on former agricultural land: a medical complex in Yakima, an apartment complex in Wenatchee, and a Toyota dealership in Wenatchee.

Overview of the Pilot Project

Julie Wilson of Landau Associates described plans for soil sampling in Yakima County to test a Geographic Information System (GIS) mapping tool for predicting soil contamination. She noted that the Yakima County pilot project includes two phases:

1. a mapping component, which is already complete, to identify former orchard lands from historical aerial photographs and integrate these data with a GIS database including data on current land uses; and
2. a confirmational sampling component, to collect soil samples at approximately 100 properties to test the use of the GIS mapping tool as a predictor of elevated concentrations of arsenic and lead.

Based on the sampling results, Work Group I will evaluate the mapping tool in terms of cost, accuracy, and other considerations. The Task Force will then be asked to consider the utility of this tool in identifying areas with elevated levels of arsenic and lead. Rick Roeder of Ecology noted that a mapping tool of this type might offer local governments a way to more precisely define areas of elevated arsenic and lead concentrations without doing soil sampling.

Implications of Sampling

Since the confirmational soil sampling involves selecting properties for blind sampling[1] within three categories of properties, Ecology plans to send randomly selected landowners letters that inform them of the project and ask permission to have soil samples taken at their properties. Landowners who agree to participate would be able to choose whether or not to receive the results of the soil sampling on their properties. Ecology's Central Regional Office will follow up each letter with a phone call to further explain the project and the implications of the soil sampling to landowners.

This approach raises various technical, legal, and other issues for participating landowners and the pilot project itself. Several Task Force members have been working with Ecology and the Office of the Attorney General on the draft sampling access letter to resolve concerns about potential legal risks to landowners and potential financial impacts from the possible need to disclose specific sampling results in any real estate transaction on the sampled property.

[1] The sampling is blind as to whether or not the sampling locations may have elevated levels of lead or arsenic.

Steve Thiele of the Attorney General's Office described two primary legal issues related to the letter that he and this subset of Task Force members and Ecology staff have been working on:

- *Listing under MTCA.* Ecology has decided that the soil sampling results will not be used to add new sites to Ecology's site register; (those decisions are entirely within Ecology's discretion for sites with concentrations above MTCA cleanup levels.) If sampling reveals emergency levels requiring immediate action (which is unlikely) Ecology has resources to address emergency cleanups.
- *Disclosure of information in real estate transactions.* For residential property transactions, current real estate law requires sellers to disclose information known about contamination on their properties. Consequently, landowners who agree to participate in the pilot project will have to disclose their knowledge of sampling results during real estate transactions if they choose to receive this information from Ecology. Sampling data will also be subject to public disclosure laws, but it will be difficult to match the sampling sites with specific addresses based on the nature of the sample selection.

Task Force members expressed a range of strong opinions about the soil sampling. Members discussed whether to conduct the sampling, the timing of the sampling, information needs that should be addressed prior to sampling, and how the collected data should be managed. Some Task Force members focused on real estate disclosure issues and the need for property owners to fully understand the implications sampling might have on their disclosure obligations. Other Task Force members focused on the relative priorities of heath versus privacy, expressing their view that it is more important that people be given all available information on elevated concentrations so that individuals would be aware and could then take steps to manage any related health risks and to minimize exposures to elevated levels of arsenic and lead. Some Task Force members noted there could be adverse effects to individual and public health if the government did not release all the information from the sampling to the public.

Many Task Force members suggested that ideally Ecology would be able to offer landowners a package of information on steps that can be taken to minimize exposure at the same time they provide any information on arsenic and lead concentrations. Task Force members also asked Ecology to consider whether to issue No Further Action letters to properties that are sampled. Many, but not all, Task Force members thought it was the agency's role to consider the Task Force suggestions but that ultimately the agency must make the decision regarding the sampling and reporting.

Based on this discussion, the Task Force converged around two possible options for releasing sampling results:

1. collect soil samples and automatically provide results to landowners
2. collect soil samples and provide the results to landowners only if requested to do so by the landowners

Most Task Force members considered the choice between these two options to be Ecology's decision, rather than a Task Force decision. The Task Force advised Ecology that, in making this decision, it should balance the responsibility to disclose information to protect public and individual health with the potential financial impacts of real estate

disclosure obligations The Task Force asked that Ecology's follow-up call with landowners reflect this discussion.

Interested Task Force members will continue working with the Department of Ecology to advise the Department about the disclosure of sampling results (along with associated changes to the sampling access letter) in light of the discussion at this meeting. Ecology will communicate with the full Task Force when a decision is made on how to proceed in sampling.

Protective Measures – Site Categories and Range of Protective Measures

Dave Bradley of Ecology described the activities of Work Group II and the information collection and analysis that will be occurring for the project on protective measures. He then led discussions with the Task Force on categories of sites for which protective measures might be developed and the range of protective measure alternatives that could be evaluated for each site category.

The Task Force had the following suggestions for what to consider in selecting categories of sites:

- types of use (e.g., residential, school, public use play area, commercial development, etc.)
- users (e.g., young children or older children)
- playgrounds as well as schools
- concentrations of arsenic and lead
- sensitive populations (young children, elderly populations, and other sensitive populations)
- status of development (e.g., new vs. existing residential areas)
- property ownership – for example, rental properties may have different issues related to maintenance of exposure controls

The Task Force discussed whether cumulative exposures (that is, exposures from non-soil sources) should be considered but converged around the idea that it is unlikely the cumulative effect of all low-to-moderate sources would prompt a change in the types of exposure controls that might be considered.

The Task Force had the following suggestions for specific protective measure alternatives to consider:

- soil blending (including incorporating organic material in tilling)
- dust control methods (for example at construction sites)
- learning from measures currently taken to control occupational exposure

Task Force members expressed the desire to have measured responses that are logical and thoughtful. The Task Force also was interested in the idea that exposure control activities might be prioritized, so that, for example, it is clear what steps should be taken first at a site. A few Task Force members emphasized that cost analyses for alternatives should look at both direct and secondary costs and the issue of who is responsible for paying the costs.

Based on these suggestions and input from Work Group II, the contractor support team will develop an initial list of site categories and a range of protective measure alternatives for evaluation and will communicate with the Task Force by e-mail before the May meeting to get additional Task Force input on the initial list of site categories and protective measures. After communication with the Task Force, the initial list of site categories and range of protective measures will also be summarized in a draft technical memorandum. The draft memorandum will be discussed at the workgroup meeting on May 6 and at the next Task Force meeting on May 9.

Institutional Frameworks – Case Studies

Rick Roeder of Ecology reviewed the objectives, approach, and work products of the institutional frameworks analytical area, and then led a discussion with the Task Force on institutional frameworks case studies. The purpose of the cases studies is to help inform the Task Force's thinking on strategies to address area-wide soil contamination in Washington by providing an in-depth look at 3-5 other cleanup or land-use development projects and by examining the legal, funding, and institutional arrangements used in those projects. The case studies will document the processes and issues involved with addressing area-wide soil contamination in Washington and/or other parts of the U.S. and describe the lessons learned and key parameters for success. Mr. Roeder asked the Task Force for input on:

- topics to include in the description and analysis of case studies (e.g., project history, description of site conditions)
- criteria for selecting case studies (e.g., range or type of funding strategies and protective measures involved)
- case-study candidates (e.g., Bunker Hill, Trail, Woburn, New Jersey)

The Task Force had many suggestions for the case-study research, including:

Topics/Content of Case Studies

- response of insurance industry and financial institutions to the cleanup/development projects
- insurance approaches
- cost-sharing arrangements to finance the transition from agricultural production to other land uses (perhaps modeled after habitat conservation plans or transferable development rights)

Criteria for Selecting Case Studies

- whether germane to the socio-economic conditions in Washington
- range of financing mechanisms
- extent of governmental involvement (including an example that is "self-implementing" or involves little state governmental oversight)

Case-Study Candidates

- Barber Farm, NC: The EPA was involved with the cleanup (removal action) of orchard land at Barber Farm that had been contaminated with lead arsenate.

- Iron Mountain, CA: As an alternative to the Woburn site, this cleanup project used a large ($220 million) privately financed trust.
- The Washington State home heating oil program may offer some guidelines in terms of how funding is structured; it was negotiated with the insurance industry.
- Best management practices are used in Phoenix for addressing contamination from lawfully applied pesticides; the Arizona Department of Environmental Quality is generally not involved except at pesticide mixing areas.
- Massachusetts' brownfields program
- Wisconsin's revolving loan fund for small businesses
- Land-use planning approaches in New Zealand
- Model of ground water plume management, where fees are collected from multiple properties, but only used at high-risk properties
- Sites currently managed in Washington State (e.g., Dupont, Everett, Kissel Park, etc.)
- The Growth Management Act and how counties have implemented it

Based on these suggestions, the contractor support team will assemble an initial list of two or three case studies and potential elements of case studies and will communicate with the Task Force by e-mail in mid-April to ask for further input from the Task Force. At the May meeting, the Task Force will discuss ongoing case studies and have the opportunity to suggest additional analysis and up to two more case studies.

Public Comment

Members of the audience declined the opportunity to provide public comment.

Meeting Wrap Up

The Task Force co-chairs closed the meeting by expressing their appreciation for the active participation of Task Force members and the candid, respectful discussion of differing opinions. Both co-chairs reiterated their interest in a successful Task Force outcome of well-supported findings and recommendations that are protective, practical, and implementable for Washington residents.

Next Steps

- Ecology will develop draft language on key messages and issues for the project and will circulate this among Task Force members.
- Task Force members will continue to work with Ecology and the Office of the Attorney General on the sampling access letters. Ecology will communicate with the Task Force when it makes a decision about disclosure of sampling results.
- The contractor support team will communicate with the Task Force by e-mail before the May meeting to seek further input from the Task Force on selection of an initial range of site categories and protective measures alternatives.

- Based on the Task Force's suggestions, the contractor support team will assemble an initial list of institutional frameworks case studies and potential elements of case studies and will communicate with the Task Force by e-mail in mid-April to seek further input from the Task Force. Additional case studies may be chosen at the May Task Force meeting.
- The contractor support team will be in touch with Task Force members individually and collectively between this meeting and the May Task Force meeting.
- The next Task Force meeting will be on May 9 in Bellevue and will include a panel discussion on health issues, a look at the draft public involvement plan, and continued discussions on preliminary estimates, protective measure alternatives, and institutional case studies.

Members in Attendance
Jeff Andrilenas, American International Group
Mike Bigelow, Washington State Office of Schools and Public Instruction
Greg Firn, Wenatchee School District
Steve Gerritson, Sierra Club
Jim Hazen, Washington Horticultural Association
Jim Pendowski, Washington State Department of Ecology
Steve Kelley, Windermere Real Estate, Wenatchee
Steve Marek, Tacoma/Pierce County Health Department
Scott McKinnie, Far West Agribusiness Association
Laura Mrachek, Cascade Analytical
Frank Peryea, Washington State University, Tree Fruit Research and Extension Center
Ray Paolella, City of Yakima
Randy Phillips, Chelan-Douglas Health District
Ken Stanton, Douglas County Commission
Craig Trueblood, Preston Gates & Ellis
Mike Wearne, Washington Mutual Bank
Jim W. White (for Bill White), Washington State Department of Health
Ann Wick, Washington State Department of Agriculture

Members Unable to Attend
Loren Dunn, Riddell Williams for Washington Environmental Council
Harold Moss, Pierce County Council
Paul Roberts, City of Everett
Steve Wells, Washington State Office of Community Development

Consultant Support
Julie Wilson, Landau Associates
Elizabeth McManus, Ross & Associates Environmental Consulting
Bill Ross, Ross & Associates Environmental Consulting
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